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COMPETITION FOR PASSENGER TRAVEL

by

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	PAGE
PERSISTING CONTEST FOR TRAVEL DOLLAR	479
Struggle of Rival Carriers for Vacation Trade	479
Supremacy of Automobile in Passenger Travel	479
SHIFTS IN PASSENGER TRAFFIC PATTERN	481
Loss of Rail Passenger Traffic to Competitors	482
Decrease in Volume of Passenger Travel by Bus	483
Tremendous Increase in Popularity of Air Travel	483
INNOVATIONS TO PROMOTE AIR TRAVEL	486
Introduction of Air Coaches at Reduced Rates	486
Installment Credit Facilities for Air Travelers	487
Airline Plans for New Planes to Speed Schedules	489
RAIL AND BUS ACTION TO REGAIN TRAFFIC	490
Railroad Experimentation With Lightweight Trains	490
Use of Reduced-Fare Plans to Promote Rail Travel	494
Luxury Coaches and Post Houses for the Bus Patron	496

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COMPETITION FOR PASSENGER TRAVEL

TRANSPORTATION SERVICES of all kinds currently are bidding for the business of what promises to be a record crop of summer vacationers. An estimated 42 million persons in the United States have annual paid vacations of at least two weeks, and most of them usually take a long or short trip by car, bus, train, plane, or ship. Railroads, bus companies, and airlines have been engaged in vigorous competition, particularly since the end of World War II, to hold or increase their respective shares of the vacation trade. All signs now point to further intensification of the battle for the dollars spent on travel—whether for pleasure in vacation seasons or for business the year around.

As the national income has increased, passenger travel has mounted, and the long-term trend still is upward. The more money the American family has, the more it travels and the more expensively it travels. But not all modes of transportation have shared alike in the expanded, and expanding, postwar passenger travel market. The railroads have been carrying fewer and fewer passengers, the airlines more and more passengers. Meanwhile, all public carriers have had to compete not only with one another but also with a common rival. That rival is the privately owned automobile.

Supremacy of Automobile in Passenger Travel

For more than a generation the major means of transportation in this country, the motor car at present is estimated to carry between 80 and 90 per cent of all intercity travelers; its share of the total intercity travel load thus is several times that of the railroads, airlines, and bus companies combined.[1] As *Railway Age* pointed out, May 16, 1955, "Except for the airlines . . . all public passenger transportation has

[1] This report omits consideration of passenger traffic on the Great Lakes and other inland waterways; such traffic, accounting in 1939 for 4.3 per cent of total intercity passenger traffic handled by public carriers, amounted in 1954 to only 2.2 per cent of the total.

shriveled under the onslaught of the ubiquitous private automobile."

Automobiles accounted last year for more than 450 billion passenger-miles of intercity travel in a combined public-private carrier total in excess of 500 billion passenger-miles. Intercity travel by car has almost doubled since 1946. An estimated 65 million Americans are taking motoring vacations this summer. The chief reason why the private automobile predominates as a means of transportation is the convenience it affords. No public carrier can match the door-to-door service and the flexibility of schedule it makes possible.

A vast extension of automobile ownership, and of the mileage of paved roads, has made the private motor car the principal vehicle of passenger transport. The number of passenger car registrations, now in the neighborhood of 50 million, is more than twice as large as it was 25 years ago. It has been estimated that cars are owned by about 66 per cent of American families, and that by 1960 the distribution will extend to around 74 per cent of the families. More than 90 per cent of state-administered roads and streets are hard-surfaced. "The fact that it is possible to go virtually any place in the United States today without getting off a paved highway has materially increased the attractiveness of the private automobile as a means of intercity transportation." [2]

Extensive postwar construction of turnpikes and thruways has made automobile travel in certain sections of the country more attractive in some respects than ever. Between 1,000 and 1,500 miles of toll roads now are open to traffic, and 7,500 additional miles are planned, authorized, or under construction. Automobiles themselves have been undergoing constant improvement—even air conditioning is available today. Together, the highway and car advances have taken much of the discomfort out of driving.

Improved roadside accommodations, moreover, have made long journeys by car less tiring. Motels—becoming more de luxe all the time—offer the satisfactions of air conditioning, swimming pools, tennis courts, and television; the convenience of roomside parking; and the economies result-

[2] National Association of Railroad and Utilities Commissioners (N.A.R.U.C.), *Report of the Special Committee on Cooperation With the I.C.C. in the Study of the Railroad Passenger Deficit Problem* (1952), p. 17.

ing from handling one's own baggage. There has been improvement also in the quality of restaurants along the highways. But despite all such benefits, and partly because of them, motorists still have to contend with traffic congestion on many roads. As a result, some travelers are turning to other means of transportation.

Shifts in Passenger Traffic Pattern

SHARP SHIFTS in the pattern of passenger transportation have taken place in recent years. A Cabinet Committee on Transport Policy and Organization observed in a report to President Eisenhower, Apr. 18, that the United States had "witnessed a transportation revolution" within a generation. The most noteworthy change in the decade since World War II has been emergence of the airlines as major passenger carriers. As the Cabinet committee pointed out, the railroads for many years held "a virtual monopoly of intercity transportation," whereas today they carry less than one-half of all intercity travelers using public transport services.

Railroad passenger traffic, which had been following a general downward trend since 1920, still accounted in 1939 for nearly two-thirds of total intercity travel by public carrier. During the war years, when gasoline was rationed and there was an extraordinary volume of civilian as well as military travel by train, the railroads established all-time passenger-mile records and moved almost three-fourths of the commercial intercity traffic. Since the peak year of 1944, however, there have been drastic declines, both absolute and relative, in railroad travel. The proportion of intercity travel represented by the railroads dropped below 50 per cent for the first time in 1951 and by 1954 was down to 44.7 per cent.[8]

Since 1936, when the Interstate Commerce Commission ordered separate reporting of passenger and freight reve-

[8] Railroad passenger-miles maintained a general upward trend until 1920. From a peak of 47.4 billion in that year, the total moved irregularly downward to a depression low of 16.4 billion in 1933. A total of 22.7 billion in 1939 represented 65 per cent of the passenger-miles of all public intercity carriers. Railroad passenger-miles mounted to 95.7 billion in 1944, when they accounted for 74.2 per cent of the total. By 1954 railroad passenger-miles had fallen to 29.3 billion.

nues, the country's railroads have shown a deficit in passenger operations annually with the exception of the war years 1942-1945. The combined passenger deficit last year amounted to $665 million, or somewhat less than the record deficit of nearly $705 million, incurred in 1953 despite the fact that the total volume of passenger travel, including automobile travel, reached new highs that year.

The problem of the passenger deficit has grown so serious that I.C.C. Chairman Richard R. Mitchell recently went so far as to say that he thought the federal government would have to offer the railroads a "passenger-support" subsidy.[4] That suggestion had a mixed reception among railroad men. Some indicated they would oppose a subsidy, others that they would accept such payments, however reluctantly. All agreed that they would prefer relief through repeal of the 10 per cent federal tax on railroad tickets and through curtailment of subsidies to other forms of transportation.

Loss of Rail and Bus Traffic to Competitors

The National Association of Railroad and Utilities Commissioners has noted that the railroads' "loss of short-haul traffic to the automobile and bus has been accompanied by the inroads of . . . airlines into long-haul traffic."[5] The traveler's preference for the automobile over the train on a short trip has been "almost solely responsible for the forced discontinuance of hundreds of local passenger trains."[6] As the length of a trip increases, the attraction of automobile travel tends to decline, but in the case of a short journey the train cannot compete with the car, which gives the traveler full control over his departure time. Trains can compete most effectively on trips of from 100 to 500 miles. Below that range, the automobile is apt to win out because of the flexibility it allows; above it, the airplane offers the advantage of greater speed.

Bus competition, though by no means as intense as that of the private automobile, still takes considerable traffic from the railroads. Bus lines first became serious rivals of the railways during the depression of the 1930s, when low bus fares exercised a powerful attraction, but the proportion of total intercity traffic carried by buses fell off during

[4] Speech before accounting division of Association of American Railroads, Atlantic City, N. J., June 28, 1955.

[5] N.A.R.U.C., *op. cit.*, p. 17.

[6] N.A.R.U.C., *The Railroad Passenger Deficit Problem* (1954), pp. 6-7.

the war. However, the lower fares, more frequent departures, and—in certain instances—faster operating times of buses still bring them many passengers who otherwise might travel by rail coach.

The most severe common-carrier competition for the railroads has been that coming from the airlines. While the railroads' share of total common-carrier passenger-miles fell from 64 per cent in 1946 to 45 per cent in 1954, the airlines' share jumped in the same period from 6 per cent to 25 per cent. Originally, the airlines took mainly Pullman passengers from the railroads. More recently, the "advent of the air coach with its lower fares, comparable to rail fares," has posed an increasing threat to all rail passenger traffic between major cities.[7] Airline inroads into the long-haul coach business, which has been one of the most profitable rail passenger operations, have been a matter of special concern to the railroads.

Bus lines, like the rail carriers, have been losing customers steadily since World War II. In a generally prosperous period low bus fares have been less of an attraction to travelers than in past years, and many former bus riders have begun to patronize more expensive modes of transportation. Many others have become automobile owners. According to the National Association of Motor Bus Operators, the decline in bus travel has been the result "principally . . . of continuing competition from the private automobile." [8]

The average journey by bus is only about 60 miles. Buses cannot compete with private cars on trips of that length. However, with an average fare of only about two cents a mile—lower than that of any other public carrier—and with service to points not reached by other public transportation, the bus continues to supply a certain demand. Approximately 23,000 buses are operated in intercity service by some 2,400 companies.

Tremendous Increase in Popularity of Air Travel

Growth of air travel during the past 10 or 15 years has bordered on the fantastic. The number of passenger-miles credited to airlines last year was roughly 25 times the total

[7] *Ibid.*, p. 8.

[8] National Association of Motor Bus Operators, *Results of 1954 Bus Operations* (Apr. 5, 1955), pp. 1-3.

of 1939, while the percentage of intercity common-carrier traffic moved by air was more than 12 times as large in 1954 as it had been in 1939 and four times as large as in 1946.[9]

The railroads of the country still record more passenger-miles and account for a substantially larger percentage of total intercity passenger traffic than the airlines. However, a comparison of common-carrier passenger traffic (excluding commutation traffic) shows that in 1953 and 1954 four of the six leading individual rail and air carriers were airlines; in 1950 only one airline—American—had ranked among the first six carriers. American moved up the scale from fourth place in 1950 to third in 1953 and second in 1954.[10]

One reason for the growth of air travel is that many more cities than formerly are now served by airlines. Last year 59 lines operated 1,454 aircraft on routes serving 543 cities, whereas in 1938 there were only 22 lines flying 345 planes into 183 cities. In 1954, moreover, 2,208 daily schedules were operated, as against only 284 in 1938.

Air traffic has been promoted also by improvement of airline safety records, which now equal or surpass those of other forms of transportation. The air fatality rate for domestic scheduled airlines in 1954 was 0.09 fatalities per 100 million passenger-miles; the railroad rate was 0.07. In 1953, latest year for which comparable figures are available for all modes of transportation, air travel was actually the safest of all. Fatality rates per 100 million passenger-miles were recorded in that year at 0.06 for airlines; 0.13 for buses; 0.16 for trains; and 2.9 for private automobiles and taxis combined.

Influence of Speed and Low Fares in Shift to Planes

Chief factor in the increasing shift to air travel is the unbeatable speed advantage that the airplane holds over other means of transportation. Nearly 60 per cent of busi-

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[9] Airline passenger-miles totaled 683 million in 1939, 5,948 million in 1946, and an estimated 16,600 million in 1954. The airline share of total common-carrier intercity passenger-miles rose from 2 per cent in 1939 to 5.9 per cent in 1946 and an estimated 25.3 per cent in 1954.

[10] American Airlines held first place for the first six months of 1954, but for the year as a whole it yielded top rank to the Pennsylvania R.R., long-time leader. The six leading carriers last year ranked as follows: Pennsylvania R.R., American Airlines, United Air Lines, New York Central R.R., Eastern Air Lines, Trans World Airlines.

ness executives interviewed in a recent survey indicated that they preferred plane travel for that reason.[11] Progressively higher aircraft speeds continue to increase the plane's advantage. The standard prewar transport, the Douglas DC-3, cruised at about 180 miles an hour; in contrast, today's Douglas DC-7s cruise at about twice that speed. A coast-to-coast trip in 1939 took more than 18 hours and required four stops; today's non-stop flight is completed in only about eight hours or a little longer.

Ralph S. Damon, president of Trans World Airlines, told a symposium at the Brooklyn Polytechnic Institute last January that the air transport industry had "grown by leaps and bounds by shortening travel time and cutting price." "By these very acts," he said, "we have *created* travel." And he concluded: "This creation of travel by creating *desire* and *ability* to travel is the very keystone of our philosophy of air transportation." [12]

Unlike average bus and train fares, which have gone up by about 25 to 35 per cent since before the war, average plane fares have risen by only about 4 per cent. Joseph P. Adams of the Civil Aeronautics Board gave it as his opinion at a board hearing last November that the air transport industry was in its present advantageous position because of its low fares. "I believe," said Adams, "that low fares are what . . . [has] guaranteed . . . [and is] still guaranteeing the prosperity of the industry."

On long trips plane travel, with its free or inexpensive meals and prohibitions against tipping, can prove as cheap or cheaper than travel by either bus or rail coach. The air coach fare for an 11-hour flight from New York to Los Angeles is $108.90, and a $1.25 box lunch is available for the only meal that needs to be eaten en route. Both rail coach fare—about $90—and bus fare—about $60 to $65—are considerably lower, but the longer travel times involved and the additional expenses thereby occasioned make the overall cost of a bus or train trip nearly or quite as much as that of a plane trip.

President Damon of Trans World Airlines told a New

[11] More than 1,000 executives were interviewed in the survey, which was conducted by MacFarland, Aveyard, & Co., the advertising agency of the Pullman Co. Results were reported in *Railway Age*, May 16, 1955, pp. 151-52.

[12] Speaking at Peoria, Ill., on Apr. 25, Damon observed that the airlines had "eliminated the problem of 'not enough time' and are rapidly working on the problem of 'not enough money.'"

York audience last February that one of his company's employees had traveled from New York to Los Angeles by bus and train and kept a careful account of what he had spent. "Although his bus ticket," Damon said, "was only $65.21, by the time he got to Los Angeles and paid for four days of meals and other miscellaneous charges, he had spent $110.32, or more than the air fare, and arrived exhausted after four days and nights of travel. He returned by rail coach in two days and 21 hours, but at a total cost, including meals and miscellaneous, of $109.80."

Innovations to Promote Air Travel

ALL SEGMENTS of the transportation industry are striving for as large a share of the passenger market as they can manage to hold or capture. Rail and bus lines are trying to stop the erosion of their passenger business, while airlines are attempting to make even more converts to their mode of travel. In the campaigns to win more customers, each carrier stresses its most nearly exclusive feature. The airlines are selling speed, the railroads emphasize schedule dependability, and the bus lines dwell on economy. In addition, all have put into service—or are planning to put into service—radically improved transport equipment. Some carriers are experimenting with lower-fare plans. Others are trying to improve their terminal facilities. And generally they are making every effort to render more courteous service and enhance the comfort of passengers.

Introduction of Air Coaches at Reduced Rates

To encourage air travel, a few airlines in 1948 introduced the air coach.[13] That service enabled the airlines to compete in the economy-class market for the first time and provided an important stimulant to traffic.[14] In 1949, first full year of operation, air coach service accounted for less than 4 per cent of total air passenger-miles, but by 1951 it had become responsible for more than 12 per cent of the total, and by 1954 for nearly 33 per cent. All of the 13

[13] On coach planes there are no free meals, more passengers are carried, and departure times may be less convenient (as in the case of "night" coaches) and schedules slower.

[14] "Nobody knows how much of the increase in traffic has been due to the introduction of coach."—Earle D. Johnson, former president of the Air Transport Association, presentation before Civil Aeronautics Board, Nov. 22, 1954.

trunk airlines except one, Northeast, now offer coach service; some of the lines, such as Eastern, National, and Trans World, are reported to do more than half their business in coach operations.

Certain airline spokesmen have suggested that eventually the bulk of air transportation will consist of coach traffic. But the lines are of two minds about it. Although the coach service undoubtedly has created some entirely new business, it has apparently cut into the first-class traffic. Plane passengers paying regular first-class fares accounted for 89 per cent of total air passenger-miles in 1949, but for only 60 per cent in 1954.

From 7 to 8 per cent of total air-passenger miles, annually since 1949, has been accounted for by passengers traveling under the so-called family-fare plan. The family-fare plan allows members of a family traveling together (a man and wife or one or two parents and children) to fly on Mondays, Tuesdays, or Wednesdays on payment of one full fare and of half fares for the accompanying spouse and children. This reduced-fare plan, introduced six years ago, is now offered on all trunk airlines.

Installment Credit Facilities for Air Travelers

Arrangements to pay for airplane tickets on the installment plan have been instituted by all major airlines, and some feeder lines, as a means of promoting air travel. "Fly now—pay later" plans, the first version of which was introduced by National Airlines in 1950, are financed, not by the airlines themselves, but by local banks to which travelers are referred for personal loans repayable in installments.

How much new business the installment plans have generated is uncertain, but President Damon of Trans World Airlines told the Peoria, Ill., Ad Club on Apr. 25 that T.W.A. had sold "a million and a half dollars' worth of transportation on a credit basis" between Aug. 1, 1954, and Mar. 31, 1955. T.W.A. studies indicated, he added, that "Virtually all of this credit travel is new business, either by customers who would not otherwise travel, or those who, with the ready credit, travel to more distant points than would otherwise be the case." [15]

Another airline service, the convenience of which may

[15] Because T.W.A. is both an international and a domestic carrier, Damon's figures presumably include an unspecified amount of overseas travel.

have brought the airlines additional customers, is the so-called Universal Air Travel Plan (U.A.T.P.). That is a credit system under which travelers may charge the cost of plane tickets on any line against a deposit of $425 left with the airlines. Businessmen especially are said to like the convenience of the arrangement; about 55 per cent of the business executives interviewed in a recent survey reported that they used air credit cards.

According to John A. Lundmark, secretary of the U.A.-T.P., air travel credit cards valid for travel in North America were held last year by nearly 458,000 persons, an increase of almost 42,000 over the preceding year.[16] At least two airlines, Western and North Central, have credit plans, applicable only to travel on their own routes, which require no deposit.

Steps to Improve Air Service and Dependability

The airlines are trying to improve customer relations by improving airport facilities. One of the chief handicaps to air travel concerns, not the facilities at air terminals, but the location of airports at increasingly long distances from downtown districts. Long city-to-airport distances militate against plane journeys of only a few hundred miles.[17] In extreme cases more time is spent driving to and from the airports than in the air. It takes only about 40 minutes, for example, to fly from Detroit to Cleveland, but the ride to and from the fields may occupy close to two hours. Not much can be done about this problem so long as heavy air traffic and huge planes require airports so large that they must usually be located far out of town. Helicopters or other aircraft that take off vertically and fly horizontally may eventually provide an answer.

One common shortcoming in passenger facilities at air terminals—inadequate baggage-handling arrangements—is more susceptible of correction. To cite one instance, at Washington's National Airport, long notorious for an outmoded baggage installation, a second baggage room is planned. At least six airlines now operate the type of plane that has a special baggage rack inside the cabin, which makes it possible for passengers themselves to carry their luggage aboard. A new type of "moving sidewalk," to be

[16] Separate cards are issued for world-wide use; 194,000 such cards were outstanding last year.

[17] Average length of trip per plane passenger in 1954 was 552 miles.

installed at the Dallas airport, will make it easier for passengers to get from terminal buildings to planes and *vice versa*.

The airlines are working all the time to overcome one liability of plane travel that probably annoys more airline customers than any other; that is cancellation of flights because of bad weather. In the last few years electronic landing aids have greatly reduced flight cancellations, but the dependability of air travel still gets low marks from many travelers. With air traffic constantly growing more dense, traffic control problems also cause delays. Use of color television tubes in airport radar installations—soon to be tested—is one of the latest developments that may alleviate that situation.

Airline Plans for New Planes to Speed Schedules

The airlines hope to sell their customers even more speed in the future by putting new types of aircraft into service. Although most air travelers will continue to fly in piston-engine planes for the next few years, both airlines and aircraft manufacturers are laying plans for a change-over to faster planes.

Capital Airlines announced on June 22 that the first turbo-prop aircraft to be used by a domestic line, the British-made Vickers Viscount, would go into service between Washington and several other cities on July 26.[18] Capital has bought 60 Viscounts and hopes they will have as favorable an effect on its passenger traffic as the same planes had on the traffic of Trans-Canada Airlines and British European Airways.[19] The Viscount cruises at 320 miles an hour, about 35 miles faster than its major piston-driven competitor.

American Airlines made known on June 8 that it had ordered 35 Lockheed Electras, another turbo-prop plane, for delivery in 1958 and 1959. The Electra is designed to carry from 64 to 90 passengers, according to the type of service, at a cruising speed of 414 miles and a top speed of 450 miles an hour for distances of up to 2,000 miles. It will

[18] Both jet and turbo-prop engines burn a mixture of fuel and compressed air and eject hot gases through a turbine. In a jet engine all the propulsion comes from the rearward thrust of the gases, but in a turbo-prop engine, 80 to 90 per cent of the propulsion comes from the propeller and the remainder from the jet thrust. Both jet and turbo-prop engines make possible a much smoother, more nearly vibration-less flight than piston engines.

[19] Trans-Canada started using the Viscount last spring, and British European Airways in April 1953.

have built-in loading steps, to eliminate the delay of waiting for a ramp to be rolled out, and baggage racks that will allow passengers to bring their own luggage aboard. Shortly after American announced that it had contracted for the Electras, its president, C. R. Smith, said his company planned to utilize jet transports as well as turbo-props.

Numerous U.S. airlines have expressed interest in jets, and it is expected that most of the major lines eventually will buy them. So far, however, no orders have been placed. The Douglas Aircraft Co. announced on June 7 that it was building the country's "first passenger jet transport" as a company project;[20] its DC-8 jet, scheduled to be ready for flight testing by December 1957 and for service by 1959, will carry from 80 to 125 passengers at speeds of up to 550 miles an hour.

Such speeds would make possible Los Angeles-New York flights in 4½ hours, compared with present first-class schedules of about 8 or 8½ hours; New York-Detroit flights in 1 hour and 26 minutes, as compared with 2 hours and 45 minutes currently; and New York-Miami flights in 2 hours and 21 minutes, as compared with 3½ hours now. Douglas has maintained, moreover, that the DC-8 will be able to operate "at costs even lower than current passenger models."

Rail and Bus Action to Regain Traffic

RAILROADS are banking on various high-speed, lightweight trains now under development to recapture at least a part of their lost passenger business. Six of the largest railroads—Baltimore and Ohio, Chesapeake and Ohio, New Haven, New York Central, Pennsylvania, and Santa Fe—announced last Feb. 15 that they were pooling their experimental resources to make a joint study of such equipment. Three basic designs were planned. Four of the six roads expected to order trains of "startlingly different" design.

Most lightweight trains are characterized by a low center of gravity, articulated construction, and guided axles, which enable them to take curves at high speed without sacrificing

[20] The Boeing Airplane Co. has produced a prototype jet plane, capable of use as a tanker or transport, which already has made more than 100 test flights.

safety or passenger comfort. It is the added speed that probably will appeal most to travelers. The principal merit of the trains from the railroad standpoint is that they are expected to cost less to acquire, maintain, and operate. Many railroad officials hope to cut passenger deficits by the use of such equipment.

The train that may be the first of the radically new models to go into operation, the Talgo-type train being built by ACF Industries, is probably the oldest in conception. The original Talgo was built in this country in 1949 for the Spanish National Railways.[21] ACF now is building, for the New Haven and the Rock Island, two Talgo-type trains patterned on the original but designed specifically to meet the operational requirements of U. S. railroads. Delivery to the Rock Island, first road to put in its order, is planned for late 1955. C. J. Hardy, chairman of ACF, said on May 11, when a sample Talgo car was tested near Hoboken, N. J., that the company expected to build such cars at "half the cost of a standard coach." He thought the new cars would cost only "one-fourth as much to maintain."

Another train that has been in the news nearly as long as the Talgo is the so-called Train X, the prototype of which was constructed in 1950 by the Pullman-Standard Car Manufacturing Co. in cooperation with the C. & O. The New York Central and the New Haven announced late in March that they both had ordered Train X models from Pullman-Standard for delivery in the second quarter of 1956. According to the New York Central's 1954 annual report, "It is expected that these trains will have only one-fourth the weight and cost per passenger of the conventional train and will cost not more than one-half as much to operate."

General Motors announced on June 10 that it had designed and was building, "at the request of a committee of railroad presidents," a lightweight, low-cost passenger train. Both the New York Central and the New Haven have expressed interest in the G.M. train, which is to be shown publicly in Chicago in September. The Pennsylvania has ordered from the Budd Co., for delivery early next year, a lightweight train of "tubular construction" designed by the mechanical research committee set up by the six cooperating railroads.

[21] The train was named after the initials of its Spanish designation and its designer, Goicoechea: *Tren Articulado Ligero Go* (Goicoechea's Articulated Lightweight Train).

Technical Characteristics of New-Type Trains

Cars for all these trains will be lighter, lower and, with the exception of the tubular models, shorter than conventional cars. The weight of a conventional train (including the locomotive) is about 2,900 pounds per seat; that of Train X is a little over 1,300 pounds. A conventional passenger coach is 13 feet, 6 inches high; in contrast, the G.M. train is only 10 feet, 9 inches high. The center of gravity of conventional equipment is 58 inches above the rails, but that of the tubular cars is less than 39 inches.[22] The car floor in the Talgo train is only 18 inches above the rails.

In comparison with 14-car passenger trains now in service, which on the average seat about 70 passengers per car, the Rock Island Talgo will have only four coaches accommodating 296 passengers. The G.M. train will seat 400 passengers in 10 coaches, and the tubular train, with seven coaches, will accommodate 574 persons. Speeds have not been made public for all the new trains, but the G.M. model has been described as capable of attaining "over 100 miles per hour for sustained stretches"; the Talgo hit a speed of 102.8 miles an hour during a test run between New Haven and Boston on June 29, 1954.[23]

Improvement of Conventional Railroad Equipment

Many railroads, instead of waiting for trains of revolutionary design, are concentrating on modernizing old and acquiring new conventional equipment in order to make an immediate appeal to potential travelers. According to the passenger deficit committee of the National Association of Railroad and Utilities Commissioners, an "appreciable percentage" of the diversion of passenger traffic from the railroads to competing forms of transportation "may be attributed to the use of outmoded and, by today's standards, uncomfortable equipment." "It has been satisfactorily demonstrated," the committee has noted, "that the traveling public will not utilize outmoded equipment of any form of transportation when at the same—or lower—charge, it can travel in greater comfort by other means." [24]

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[22] Estimates from "The Passenger Train of the Future," *Railway Age*, May 16, 1955, p. 126.

[23] The world's train speed record, 205.6 miles per hour, was set by a French electric locomotive last March. Many American trains frequently attain speeds of 90-100 miles per hour, but the speed for all passenger runs averaged only 39.5 miles per hour in 1954.

[24] N.A.R.U.C., *The Railroad Passenger Deficit Problem* (1954), p. 24. Average age of all passenger cars on Jan. 1, 1954, was about 27 years.

Nearly 4,000 new passenger cars have been put into service since the end of World War II, and hundreds of others have been rebuilt and modernized. A total of 225 coach, Pullman, and miscellaneous passenger-carrying cars were added during the year ended June 30, 1954, as compared with 127 the previous year. Some Pullman equipment has been rebuilt, and many old coaches have been fitted with reclining seats. About 85 per cent of all passenger cars are now air-conditioned. More and more railroads are offering stewardess service, a feature that appeals especially to mothers traveling with young children.

More progress has been made in modernizing motive equipment than in improving passenger cars. Last year 86 per cent of all passenger trains were powered by diesel locomotives, and many railroads have converted entirely to diesels. "In spite of these 'steps in the right direction,'" the passenger deficit committee noted in its 1954 report, "many . . . trains . . . are still unattractive to the public." Observing that the new equipment understandably was placed on "name" trains, the committee pointed out that this practice did "not improve the unattractive secondary trains on which most of the passenger deficits are recorded."

One equipment innovation popular with the traveling public is the glass-topped dome car from which passengers, seated at roof level, can view the countryside. Dome cars have enabled the railroads to sell scenery rather than speed. Introduced on the Burlington's California Zephyr in the late 1940s, dome cars now are attached to nearly all leading trains in the West. The Baltimore and Ohio, only eastern road with such equipment, has fitted its dome cars with floodlights for night-time viewing.[25]

Increased Utilization of Self-Propelled RDC Units

The N.A.R.U.C.'s passenger deficit committee asserted last year that "Bold experimentation in the field of rail passenger equipment must promptly be undertaken if the railroads expect to recapture passengers lost to competing modes of transportation."[26] One of the committee's recommendations was a strong plea for increased use of self-propelled cars. Known as RDC (rail diesel car) units, these cars, built by the Budd Co., have a top speed of over 80

[25] Fourteen railroads owned a total of 176 dome cars on May 1, 1955.
[26] N.A.R.U.C., *The Railroad Passenger Deficit Problem* (1954), p. 25.

miles an hour and can be operated from control cabs at either end, singly or in multiple-unit trains. There were 112 RDC units in operation in August 1954, as compared with 97 a year earlier.

Widely used in commuter service by the Boston and Maine and other railroads, the RDC units have been considered for use also in fast, long-distance passenger service. The Baltimore and Ohio test-operated a three-unit RDC train between Washington and Chicago over the Memorial Day week-end and found that it could make a faster run than regular trains because, unlike them, it could maintain maximum or near-maximum speeds on grades and curves.

The Pullman-Standard Co. has developed a Day-Nite-Duplex coach in which every other seat is elevated two steps above aisle level. It has space for 56 passengers in reclining seats, whereas the standard coach can accommodate only 44 persons in reclining seats. Although the new coach is expected to cost about $20,000 more than a standard car, its extra seating capacity will enable it to produce nearly $660 more revenue on a 2,200 mile one-way trip than present coaches. The new Siesta coach, designed to offer Pullman-type service at coach fares, will contain 36 single and two double rooms in a standard 85-foot car. "This type [of] coach may coax back to the rails some of the long-haul passengers" lost to air coaches, but "the obvious expense of such elaborate equipment will restrict its use insofar as most deficit trains are concerned." [27]

Use of Reduced-Fare Plans to Promote Rail Travel

All the new, modernized, and improved equipment notwithstanding, probably the strongest lure that the railroads can hold forth to attract more passengers is lower fares. Many roads consequently are experimenting with special incentive fares. Reduced family-plan coach rates, aimed primarily to attract travelers who might otherwise use the automobile for family trips, were introduced by several eastern lines in June 1952. Roads in other sections of the country followed suit. The following year the Union Pacific extended family fares to first-class service, and this practice also spread.

Some roads limit use of the family plan to certain trains and certain days of the week, but others impose no limita-

[27] *Ibid.*, p. 26.

tions. Whether family-fare plans have increased revenues or merely the number of passengers continues to be debated in the absence of meaningful statistics. In general, the eastern roads appear to be more satisfied with the experiment than the western roads.

Certain carriers have been experimenting with reductions in basic fares. It has been reported that some of the eastern lines may establish a 2-cent-a-mile coach fare—in contrast to the present 3.4-cent fare—when they put the new lightweight trains into service. A number of southern lines already have cut round-trip coach fares to around 1.5 cents a mile with good results.

In an attempt to win back some of the business lost to automobiles and buses, the Katy (Missouri-Kansas-Texas) Railroad instituted one-way coach fares between Dallas and San Antonio that match the bus rates. Most of the railroads that still operated extra-fare trains eliminated the surcharge in an effort to compete more successfully with the airlines. In the East one railroad has put on sale 20-ride tickets good for passage between two major cities at rates cut to an amount only slighter higher than the toll charge on the highway between the two points.

Along with experimenting with reduced fares, some railroads have been trying to cut the major in-transit expense —the high cost of dining car meals—long a source of complaint. On certain trains, mainly in the West, prices of dining-car meals have been reduced. Other trains carry grill, buffet, or coffee-shop cars in which meals are served at counters for about one-third less than in regular dining cars.

Emphasis on Convenience, Service, and Courtesy

Perhaps as important to the train traveler as considerations of cost are considerations of convenience. Although railroad advertising emphasizes that trains operate in all kinds of weather, late trains have caused great dissatisfaction. Accordingly, in addition to shortening schedules, the railroads are attempting to better their on-time records.

The railroads are trying also to improve station facilities and services. Outmoded terminals in several cities have been modernized or replaced. Installation of electronic devices to speed handling of reservations, and use of pre-

printed tickets, have helped to obviate protracted standing in line. Efforts are being made to eliminate any inattentiveness or discourtesy on the part of passenger service employees.

Some railroads offer credit plans under which tickets, meals, and other incidental expenses may be charged without payment of a deposit or service charge. The New Haven on May 1 instituted a credit system that utilizes "rail charge cards" similar to the "charga-plates" used by department stores. The Rail Travel Credit Agency of Chicago has announced that its credit card service, formerly available on 17 railroads, will be liberalized and extended on Aug. 1 to 26 additional lines.

Luxury Coaches and Post Houses for the Bus Patron

Bus lines, no less than their air and rail competitors, are seeking to expand passenger traffic by improving equipment and service. A major innovation a year ago was Greyhound's introduction of the dual-level Scenicruiser in regular service on its New York-Miami run. These king-size motor coaches have such features as complete washroom facilities, enlarged baggage space, and twin diesel engines. By last spring 312 such buses were in operation between major cities; 700 are expected to be in service by December 1955.

Buses generally have become larger and more luxurious, and business has increased on runs where the improved buses have been put into service. Many buses, particularly those operated on major routes, are air-conditioned. Schedules have been speeded up considerably in recent years, and service without change now is available from New York, Chicago, Minneapolis, and St. Louis to West Coast cities.

Like the competing carriers, bus companies offer such inducements to travel as family-fare plans. To make moderately priced meals and satisfactory comfort facilities available to passengers en route, Greyhound operates 154 "Post Houses" in 39 states; 14 of the establishments were opened in 1954, and it is planned to add six more during the current year. Bus terminals are being replaced or renovated. Transcontinental Bus Systems, which operates in the South and Southwest, has opened some two dozen new or modernized terminals in recent years.